## FACT SHEET for State Waste Discharge Permit No. ST-7425 J. H. Baxter & Company

This fact sheet is a companion document to the State Waste Discharge Permit No. ST-7425 for J. H. Baxter & Company in Arlington, Washington. The Model Wood Preserving Permit fact sheet referenced in this fact sheet is also attached. The Department of Ecology (the Department) is issuing this permit which will allow discharges of treated storm water through a subsurface infiltration gallery land surface.

This site specific fact sheet and the referenced fact sheet explain the nature of the discharge, the Department's decisions on limiting the pollutants in the stormwater, and the regulatory and technical basis for those decisions.

GENERAL INFORMATION					
Applicant:	J. H. BAXTER & COMPANY P.O. Box 5902 San Mateo, CA 94402-0902				
Facility Location:	6520 188th Street NE Arlington, WA 98223 Snohomish County				
Contact:	Ms. RueAnn Thomas Environmental Project Director (541) 689-3801				
Permit Number:	ST-7425				
Type of Industry:	Pressure Wood Treating				
Receiving Water:	Stormwater Discharge to Infiltration Gallery Following Treatment				
Discharge Location:	Latitude: 48° 09' 59" N Longitude: 122° 08' 38" W				

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## INTRODUCTION

Chapter 173-200 WAC of the ground water quality standards requires that a facility possess a state waste discharge permit, if the site has the potential to contaminate ground water quality through the practice of applying waste fluids onto the land surface. This permit is a state waste discharge permit as authorized under Chapter 90.48 RCW, which defines the Department's authority and obligations in administering the state waste discharge program.

All underground injection activities are regulated by the Department's Underground Injection Control (UIC) program regulations (Chapter 173-218 WAC). Authorized under the Safe Drinking Water Act (40 CFR 144-147), the primary mission of this program is to protect all underground sources of drinking water. The Environmental Protection Agency (EPA) Region X formally delegated the UIC program to the Department in 1984. The Department currently regulates all injection activities in the state. Under the state's UIC regulations, the disposal of industrial fluids, and stormwater that is contaminated and/or potentially contaminated into the subsurface by means of injection wells, is prohibited. Currently, there are no provisions in state regulations for authorizing by permit, the use of Class V shallow injection wells for disposal activities within the state.

The regulations adopted by the state include procedures for issuing permits (Chapter 173-220 and 216 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of stormwater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements for issuing a permit under the state waste discharge permit program is the preparation of a draft permit and an accompanying fact sheet. The proposed permit is issued under the authorization of Chapter 173-216 WAC. This is not an underground injection control permit.

Public notice of the availability of the draft permit and fact sheet is required at least thirty (30) days before the permit is issued (WAC 173-216-090). The fact sheet and draft permit are available for review (see Appendix A—<u>Public Involvement</u> of the fact sheet for more detail on the public notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. Comments and the resultant changes to the permit will be summarized in Appendix D—Response to Comments.

#### BACKGROUND INFORMATION

#### DESCRIPTION OF THE FACILITY

#### HISTORY

The J. H. Baxter (Baxter) facility at Arlington is a wood preserving operation that specializes in pressure treatment and butt end treatment of poles (Figure 1). The facility has been in operation since 1971 using pentachlorophenol (PCP) as a preservative. Copper naphthenate has been used as a preservative since March 2003. Creosote was used beginning in 1983 and discontinued in 1990. Baxter produces primarily 40- to 45-foot utility poles but has the capacity to treat 20- to 130-foot poles. Baxter treats approximately 40,000 poles or more using 200,000 gallons per year of an organic-based preservative containing approximately 5% pentachlorophenol (PCP). The copper naphthenate solution is prepared using 1.2% copper naphthenate and 98.8% of P-9 oil (diesel 2).

Coastal Douglas Fir, Western Red Cedar, and Alaskan Yellow Cedar poles are processed through a rotary peeler to remove the bark. Bark generated as a result of the peeling operations is sold to a nearby facility for use as a fuel in their cogeneration electrical power plant. After peeling, poles are scaled for class, cut to length, and then transported to the appropriate storage piles in the untreated storage yard for air drying. Once an order for new poles is received, the air dried, untreated poles are moved to the framing area where customer specific hole patterns and equipment mounting locations are prepared. Thus, poles are either preservative treated by the pressure process or by immersion of the butt of the pole in treating solution. After treating, poles are allowed to stand on covered drip pads (in accordance with Subpart W of 40 CFR Part 265 requirements) to ensure that preservative does not leave the treating area. Treatment process water and process area storm water are collected separately for treatment. After the treatment process is complete, the poles are bored and inspected to verify compliance with specifications and moved to the yard for storage prior to shipment. Treated poles are shipped from the site by either truck or rail.

The facility encompasses approximately 57 acres, 15 acres of which are used for pole treatment operations and 25 for untreated pole storage and pole peeling. The remaining acreage is comprised of office buildings, employee parking, a closed wood waste landfill, and vacant land. The site is divided into two parcels, A and B (Figures 2 and 3). All pole treating and treated pole storage activities are conducted in parcel A. Parcel B contains the untreated pole storage area and pole peeling operations. There has not been pole treating or treated pole storage operations on parcel B. There are two rail spurs leading into the site that are used for loading finished product and on occasion for process product delivery (i.e., base oil or solution). The rail tracks outside the treating building are used to load the untreated poles into the retorts.

The topography of the site is flat. Approximately 90% of the area is not paved. 10% of the area is covered with impervious surfaces in the form of buildings including the treating buildings (retort and butt areas), office building, yard office, two shops, pole peeling structures, pole incisor, and lunch room. An overview of the facility layout is shown on Figure 3. The main road on the site passes between the treatment area and the former landfill prior to entering the untreated wood storage area. The roadway is generally higher in elevation than the pole storage areas.

#### INDUSTRIAL PROCESS

Baxter employs two treatment processes: 1) pressure treating within a retort through water extraction, and 2) a thermal treatment system which treats only the butt ends of the poles. Both processes use a PCP mixture for the treatment preservative. Copper naphthenate is used for treating butt ends of the poles only. The PCP treatment process is described in the attached model fact sheet. (The information presented in the attached Model Wood Preserving Fact Sheet is used as a reference to this site-specific permit and fact sheet).

#### WASTEWATER SOURCE AND TREATMENTS

## Process Wastewater

Process wastewater is collected from the process wood treatment areas and treated through a carbon adsorption system and sand filter before it is reused as make-up water for cooling in the wood treatment process. The carbon adsorption system was installed in late 1998. The excess water is sent through the cooling tower, and then is evaporated into the air. Oils are recycled back into the process. Approximately 90% of the process area is roofed.

## Stormwater Discharge to Ground

In general, there are three categories of stormwater areas of contact and potential for contamination for a wood treating industry, which are discussed in the attached model fact sheet. The stormwater information below pertains to the J. H. Baxter, Arlington site-only.

Storm water from the J. H. Baxter, Arlington site in both the treated and untreated wood storage areas, is discharged to the ground via infiltration. Storm water from the depressed area is routed to several man-made ditches to prevent ponding and reduce cross-contamination from truck traffic.

The facility has once utilized French drains to promote the infiltration of contaminated storm water to the ground, which is prohibited under Chapter 173-218-090 WAC. Thus, the Department ordered J. H. Baxter to close all 26 French drains, through Administrative Order DE 00WQNR-850 which was issued on April 12, 2000. A closure work plan was submitted to the Department and all French drains were closed by August 15, 2002. After the closure of these drains, the facility constructed a few ditches on-site to assist the site drainage, and to prevent ponding and interference of everyday operations.

During the course of pursuing drain closure, the facility installed three lysimeters in the treated wood storage area, in each of the three drainage trenches surrounding the Main Treatment area, for sample collection and monitoring purposes. The facility began stormwater monitoring from these lysimeters in January 2001. The lysimeter locations are as follows:

- Lysimeter L-1 is located in the ditch adjacent to former French drain #24;
- Lysimeter L-2 is located in the east-west section of the ditch where former French drains #13 and 14 were located;
- Lysimeter L-3 is located in the center of the north-south ditch on the west side of the treated product storage area, nearby former French drain #23.

J. H. Baxter conducted an AKART analysis study for the contaminated storm water in 1997, and submitted an engineering report for construction of a containment swale (bioswale) and a treatment system on September 9, 2002. This engineering report was amended several times before it was approved by the Department on August 4, 2003. Consequently, the Plans & Specifications were submitted and approved by the Department on September 24, 2003. The proposal in the report includes the collection of storm water from both the treated and untreated wood storage areas through three collection sumps, an infiltration gallery, treatment for storm water (Figure 3) prior to discharge to the infiltration gallery which would be located in the untreated wood storage area, a treatment building, and the installation of treatment equipment.

Construction of the containment swale (bioswale) and the infiltration gallery are underway. As of April 2004, the treatment building is in the process of construction which will be followed by installation of the collection sumps and treatment equipment. The treatment system construction is anticipated to be complete by the end of November and to be in operation by January 2005. Once the treatment system is in operation, the lysimeters will be removed.

Storm water is to be collected on-site through the three collection sumps, and treated prior to discharge to the infiltration gallery. Untreated storm water will be required to be stored in impermeable containers/tanks. As informed by the Permittee, the bioswale will be backfilled with clean soil.

## Cleanup Remediation

The facility received an Agreed Order No. 99-TC-N405 from the Department's Toxic Cleanup Program (TCP) on June 10, 1999. This order was issued pursuant to the authority of the Model Toxics Control Act Cleanup Regulation [RCW 70.105D.050(1)]. The Agreed Order requires J. H. Baxter to conduct a remediation investigation (RI) and a feasibility study (FS) to address the contaminated storm water resulting from current and past practices from the site. A draft RI study was submitted to the Department on March 2000.

On April 30, 2001, the Environmental Protection Agency (EPA) Region X issued an Administrative Order under Section 7003 of the Resource Conservation and Recovery Act, 42 U.S.C. §6973 (a), to J. H. Baxter. The order requires the facility to take immediate actions to identify, control, and treat contaminated storm water. This order supercedes the Department's TCP Order No. 99-TC-N405. The findings of several investigations at the facility indicate that site-related chemicals of potential concern were detected in on-site surface soil, subsurface soil, storm water, vadose-zone pore water, and ground water. Ongoing cleanup activity at the site is overseen by EPA Region X.

#### **Ground Water**

PCP spills occurred at the site in 1981, 1989, and 1990. J. H. Baxter voluntarily connected the mobile home residence located on property adjacent to the northwest property boundary of the site, to the city water supply in December 1992. In 1999, 2000, and 2001, Baxter conducted a field investigation to identify potential sources of PCP detected in groundwater monitoring wells MW-2, MW03, and BXS-1 (Figure 5). All monitoring wells on-site are approximately 40 feet deep. In 1988, Baxter conducted a beneficial use survey of the water supply wells in the area (Sweet-Edwards/EMCON 1989), which was later updated in 2000 and 2001 (Hart Crowser 2000/2001). Within the survey area, 26 water wells were identified. Of these, 21 are being used for water supply. The other five wells identified have been abandoned. The aforementioned drinking water wells identified in the Drinking Water Sampling and Alternate Water Supply Work Plan were sampled biannually during four sampling events in June 2001, January 2002, July 2002, and January 2003. This work was completed pursuant to paragraph 51 of the Administrative Order on Consent between EPA and Baxter dated April 30, 2001. The samples were sent to a qualified analytical laboratory for analysis of pentachlorophenol and tetrachlorophenols. No pentachlorophenol or tetrachlorophenols were detected in any of the wells during the two-year period. EPA has determined that the drinking water sampling program is complete and no additional sampling is required. A City of Arlington water supply well (185 feet deep) is located approximately 1,500 feet to the west of the facility. The City of Arlington was contacted by the Department in 1996, and it was confirmed that the Baxter site does not show up in the City's 10-year Well Head Protection Plan.

## Geology and Hydrogeology of the Site

The facility lies in the Marysville Trough, a broad outwash plain located generally between Arlington and Marysville. Three distinct hydrogeologic units were identified at the site as fill material, gravelly sand, and deeper fine sand. Fill materials present at the site include wood waste and backfill material at a depth up to 13 feet below ground surface (bgs), and is reportedly present at depths up to about 23 feet bgs in the closed wood waste landfill. Gravelly sand is found below the fill material, at a depth up to 42 bgs. The gravelly sand unit is typically gray to brown gravelly sand with little silt. Fine sand is present beneath the gravelly sand, at depth up to 42 feet bgs, depending on location of the facility. The fine sand typically consists fine to medium sand with small amounts of silt.

The facility also lies on the northernmost boundary of Quilceda Creek watershed. In this area, surface water flow from the Getchell Upland to the east is directed to a man-made ditch that flows south along the Burlington Northern Santa Fe Railroad tracks. A network of drainage ditches conveys these surface waters to Quilceda Creek approximately 2 to 3 miles south of the facility.

Regional groundwater flow directions in the outwash deposits are to the north and northwest, with a groundwater divide estimated to be about one mile south of the facility (USGS 1997). The closest surface water receptor is Portage Creek, a tributary to the Stillaguamish River. Portage Creek lies approximately 1,500 feet north and northwest of the facility and is likely the principal discharge point for ground water in the outwash deposits (Newcomb 1952).

Ground water is present beneath the facility at depths between 10 and 40 feet bgs depending on time of year and location on the facility. Groundwater elevations are highest on the south and east sides of the facility. Seasonal water level fluctuations of 10 to 20 feet have been observed in response to long-term precipitation cycles. Hydraulic conductivity values range from 2 to 20 feet/day in the fine sand and 100 to 150 feet/day in the gravelly sand.

## Surface Water Discharge Option

J. H. Baxter evaluated the option of discharging to surface water. The channel downstream from the site is within the Quilceda Creek watershed. The surface water body would then be the Middle Fork of Quilceda Creek via approximately 2 to 3 miles of conveyance drainage system. The stormwater conveyance system changes from a railroad drainage ditch to a closed pipe network and eventually to a series of agricultural channels which travel through a section of residential area before it reaches Quilceda Creek. The facility conducted a study to assess the hydraulic conditions and to survey likelihood of fish aquatic life in this conveyance drainage system. On October 31, 2002, the facility submitted a report titled: Hydraulic Assessment of Downstream Drainage Course which documents their survey and findings. In summary, the facility needs to obtain an easement from the railroad company to use the ditches that run along the railroad track, to dredge and maintain in good conditions the ditches and channels, and to eliminate the likelihood of liability for discharging into a conveyance system that crosses the residential area. Due to these issues, the facility decided not to pursue with the surface water discharge option any further.

## PERMIT STATUS

The previous permit for this facility was issued on April 12, 2000, and modified twice on December 4, 2000, and April 24, 2003, with an expiration date of June 30, 2004. The previous permit was issued with numeric limits and a compliance schedule requirement.

An application for permit renewal was submitted to the Department on December 31, 2003, and was accepted by the Department on January 21, 2004.

#### SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on January 9, 2003. Administrative Order No. DE 00WQNR-850 was issued to the facility on April 12, 2000, to require closure of the French drains on-site. All drains were closed by August 2002. During the history of the previous permit, the Permittee has had the following violations based on Discharge Monitoring Reports submitted to the Department:

<u>Parameter</u>	<u>Outfalls</u>	Date of Exceedance
Pentachlorophenol	FD 13	09/00
	FD 14	09/00
	FD 23	09/00
	FD 24	09/00
	FD 26	09/00
	FD 16	03/01

pН	FD 23	09/00
	FD 1 through 6	09/00
	FD 7 through 12	09/00, 01/01, 05/01, 12/01, 03/02
	FD 19 through 21	09/00
Oil & Grease	FD 7 through 12	05/01, 01/02, 03/02
	FD 19 through 21	05/01
	FD 22	09/00

During the history of the previous permit, the facility has remained in compliance with the compliance schedule set forth in the permit.

## POLLUTANTS OF CONCERN

Pollutants of concern in the stormwater discharge are primarily dioxin furan, PAHs, copper, copper naphthenate, and PCP. Minor pollutants of concern are TPH-D and pH. Groundwater standards and the federal provisions of 40 CFR 122.44(d) require the Department to incorporate permit conditions, in addition to, or at the least, as stringent as EPA promulgated effluent limitation guidelines.

#### STORMWATER CHARACTERIZATION

The proposed stormwater discharge has the following characterization based on the last five years of discharge monitoring reports submitted to the Department and the additional data submitted on the permit application:

## Stormwater Runoff Data (Range Values)

Stormer Lands, Storm (Lands)							
Catch Basin, and	Oil &	PCP,	Dioxin/Furan,	pH, s.u.	TSS, mg/L		
Lysimeter Locations Grease		μg/L	ppq				
CB-14	ND	0-370	0-1.67	6.51			
CB-13	ND	0-230	0-4.1	6.66			
CB-23	ND 0-220		0-0.85	6.48			
CB-24	ND	0-380	0-1.2	6.66			
CB-26	ND	0-240	0-1.81	7.01			
CB-7 through 12 6-3 CB-16 NE	8000	28-290	480-605	5.95-6.78	75-690		
	6-36000	7.3-110	41-1648	6-7.2	314-4860		
	ND	4.8-260	225-543	6.5-6.87	52-210		
	ND	2-3.5	729	7.39	78-412		
CB-18	ND	1.4-12	712-1189	6.54-7.7	1090-3640		
CB-19 through 21	420	4.7-20	55-122	6.3-7	14-152		
CB-22	ND	0.74-28	371-859	6.3-7.02	300-573		
Ly-1	390-530	0.2-27	0-2.05				
Ly-2	ND	0.07-0.5	0-1.99				
Ly-3	ND	0.16-13	0-0.19				

All catch basins (CD) were closed by August 15, 2004.

#### GROUNDWATER MONITORING DATA

## Groundwater Data from Monitoring Wells (Range Values)

Monitoring Well Location	PCP, μg/L	Dioxin/Furan, ppq	pH, s.u.	TOC, mg/L	Water Elevation, feet	Conductivity, umho/cm
BXS-1	16-49	0-0.2	5.7-7.66	0.4-580	37	0.45-522
BXS-2	0.11-0.38	0	6.05-6.5	3.1-24	38	0.9-865
BXS-3	0.3	0-0.03	6.14-6.57	0.006-0.63	33.7	0.94-874
BXS-4	0.23-0.62	0-1.14	6.9-8.1	0.7-91	16.3	0.2-203
HCM-5	0.08-0.23		5.83-6.2		25.9-29	0.16-0.2
HCM-6	0.16		5.58-5.73		42-44	0.16
HCM-7	0.08	0.08			44-45	0.16-0.18
HMW-5	HMW-5 ND		5.9-8.5			0.2-146
HMW-6	1.3-7		6.1-7			0.12-160
Ly-1	0.2-27	0.2-27 0-2.1				
Ly-2	-2 0.07-0.5 0-2.0					
Ly-3	Ly-3 0.16-13 0-0.2					
MW-1	0.38	0-15	5.7-6.78	0.8-3.9		0.12-159
MW-2	ND	0-1.32	5.8-7.7	0.7-9.2	44	0.2-192
MW-3	1600-1800		5.9-6.24	0.7-4.3	41.4-43.7	0.19
MW-10	0.12		5.9-6.14		35.6	0.2-0.66
MW-3	270-1200	0.01	5.66-6.56			0.14-165
MW-4	ND	0.04	7.34	0.5-7.5		170.5

## PROPOSED PERMIT LIMITATIONS AND CONDITIONS

State regulations require that effluent limitations set forth in a state waste discharge permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-216 WAC). Water quality-based limitations are based upon compliance with the ground water standards (Chapter 173-200 WAC).

The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the state of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42 (a), the Permittee is required to notify the Department.

40 CFR Part 429, Subpart H for Wood Preserving - Boulton subcategory, includes wood preserving facilities which use the Boulton process as the predominant method of conditioning stock prior to treatment. Facilities using PCP for pressure treatment of wood fall within this subcategory.

#### PROCESS WASTEWATER

EPA has promulgated effluent guidelines and limitations representing BPT and BAT for all woodtreaters. These provisions require woodtreaters to <u>cease discharge</u> of process wastewater pollutants into navigable waters (see page 12 of the attached model fact sheet). Stormwater associated with the retort, drip pad, and tank farm areas <u>is considered as process wastewater</u>. Thus, such stormwater also subject to Federal Effluent Guidelines, which require "zero" discharge. Special Condition S1.B.I of the permit requires J. H. Baxter to attain "zero" discharge of process wastewater. This proposed permit does not authorize violations of RCRA, UIC or any other applicable state and federal regulations.

## STORMWATER RUNOFF AT BOTH THE TREATED AND UNTREATED WOOD STORAGE AREAS

Effluent limitations for the pollutants of concern for stormwater being applied to the land surface are proposed in Special Condition S1 of the permit. The interim period set forth in this permit pertains to the period between the effective date of this permit and the date of completion and operation of the treatment system (November 30, 2004). The interim effluent limitations will apply during the interim period described above.

## **Interim Effluent Limitations**

Baxter is required to be in compliance with interim effluent limits for PCP, TPH-D, copper, and pH beginning on the effective date of the permit and lasting through November 30, 2004. The proposed interim effluent limitation for PCP is 215  $\mu$ g/L (ppb). The proposed interim limit for TPH-D and copper are 0.01  $\mu$ g/L, 0.5 mg/L, and 1 mg/L, respectively. The pH limit is between 6.5 and 8.5 standard units. These limits are daily maximums. The compliance point will be on the land surface, as specified in the permit.

The interim limit for PCP is a technology-based limit, which is consistent with the interim limit imposed on other PCP woodtreaters five years ago. Copper and pH limits are based on the ground water standards (WAC 173-200-040). The TPH-D limit is based on cleanup levels for ground water, WAC 173-340-900 (MTCA).

There is no standardized analytical method for copper naphthenate. In addition, there is no existing ground water standard or drinking water standard for copper naphthenate. The Department proposes to regulate this compound through imposition of a copper standard, and monitoring requirement for copper. Thus, no effluent limits or monitoring requirements for copper naphthenate are proposed at this time. The Department reserves the right to impose an analytical and monitoring requirement for copper naphthenate in the future if a practical test method is developed.

Polynuclear aromatic hydrocarbons (PAHs or polycyclic aromatic hydrocarbons) are hydrocarbon compounds with multiple carbon containing rings (benzene, etc...). The Environmental Protection Agency has identified sixteen of them have exhibited carcinogenic characteristics. These sixteen polynuclear aromatic hydrocarbons are as follows:

Naphthalene Acenaphthylene

Acenaphthene Flourene
Phenanthrene Anthracene
Fluoranthene Pyrene
Benzo(a)anthracene Chrysene

Benzo(b)fluoranthene
Benzo(a)pyrene
Benzo(ghi)perylene
Benzo(b)fluoranthene
Dibenzo(a,h)anthracene
Indeno(1,2,3-cd)pyrene

These PAHs are listed as pollutants of concern for wood treater operations which utilize creosote. Although the facility discontinued the use of creosote in 1990, the submitted monitoring data for PAHs in stormwater runoff and ground water during the period of June 1994 through March 1999 indicate concentrations exceed the PAH ground water standard  $(0.01 \, \mu g/L)$ . The reported concentrations for PAHs are as follows:

Parameter	White Wood Area	FD #13 & #14	FD #23	FD #24	FD #25	MW- 2	MW-3	BXS-3
PAHs, μg/L	3.56	15.7	11.6	15.6	6.85	5.2	3.5	2

White Wood area defines as untreated wood storage area.

FD defines as French drain or catch basin.

MW defines as monitoring wells.

The PAH parameters were inadvertently omitted in the last permit which was issued to the facility in April 2000. The Department proposes an effluent limit based on the ground water standards  $(0.01 \, \mu g/L)$ , and a monitoring requirement for PAHs in this permit.

However, due to the Department's oversight, PAH was not considered in the facility's pilot study and the design of the treatment system for the stormwater discharge. The Department proposes no limit to be set at this time for PAH, but monitoring will be required for a period of two years, utilizing EPA Test Method 8270 GC/MS SIM or equivalence. According to the Department's chemists, EPA Test Method 8270 GC/MS SIM can achieve a method detection limit (MDL), and a practicable quantitation limit (PQL) below the ground water standard for PAH of 0.01  $\mu$ g/L. If Baxter can not find such laboratory within a reasonable distance that can perform the above test method, the Department will consider setting a limit at the MDL value and accessing compliance with the limit at the QL value using the approved analytical test method for PAH. If this were to occur, Baxter would be required to submit the laboratory's proposed test operating procedure for PAH, to the Department for review and approval.

If data show compliance with the effluent limit of  $0.01\,\mu\text{g/L}$  or the MDL for PAH, the Department will modify the permit to include this limit. If data show noncompliance with the limit (either based on ground water standard, or MDL value), Baxter will be required to modify the existing treatment system to include treatment for PAH. The compliance period will be determined based on the nature of Baxter's proposed treatment system modification, but will not exceed a period of three years. During this interim period, a technology-based limit will be developed using the last two years of monitoring data for PAH. In any event, since the pilot study conducted by Baxter in 2002 indicated that the system is capable of achieving the ground water standard for dioxin (0.6 ppq), the Department believes that there is a substantial potential that the treatment system will be able to treat the storm water to meet the PAH limit as well.

Samples are required to be collected in the Lysimeters 1, 2, and 3, in the treated wood storage area. The monitoring schedule for samples collected during storm events is September through May. The monitoring frequency will be once every two months (September through May).

During the interim period, storm water collected from the untreated wood storage area is discharged to the containment swale (bioswale), samples are required to be collected at the swale. As informed by the Permittee on December 3, 2004, the bioswale will be backfilled with clean soil. Beginning January 2005, storm water from both the treated and untreated wood storage areas will be collected in the three collection sumps. The collected storm water will be routed to the treatment system for treatment prior to discharge to the infiltration gallery.

## Final Effluent Limitations

J. H. Baxter is required to be in compliance with the final effluent limitations for PCP, dioxin/furan (TEQ), TPH-D, copper, and pH beginning upon the date that the treatment system becomes operational on November 16, 2004, and lasting through the expiration date of the permit. The proposed final effluent limit for PCP is 1  $\mu$ g/L, dioxin/furan in terms of TEQ is 0.6 ppq, TPH-D is 0.5 mg/L, copper is 1 mg/L, and pH is between 6.5 and 8.5 standard units. Final effluent limit for PAH will be determined after the interim period (see discussion on the previous page). These limits are maximum daily discharge. The compliance point will be after treatment and prior to discharge to the infiltration gallery.

The proposed final effluent limitation for PCP and copper are 1  $\mu$ g/L and 1 mg/L maximum daily, respectively, a ground water quality limit based on WAC 173-200-040. The final effluent limit for TPH-D and pH are the same as those interim limits. The TPH-D limit is set based on cleanup levels for ground water, WAC 173-340-900 (MTCA). The pH limit is set based on the ground water standards, WAC-173-200-040.

The effluent limit for dioxin/furan is 0.6 ppq expressed in terms of toxicity equivalence (TEQ) for 2, 3, 7 and 8-Tetrachlorodibenzo-p-dioxin (TCDD), a ground water limit. This limit is set based on WAC 173-200 subpart 040 for ground water quality criteria. The limit is expressed in TEQ based on WAC 173-200 subpart 050(5)(b) for multiple contaminants with similar types of toxic responses, which are assumed to be additive unless evidence is available to suggest otherwise.

The term dioxins represents a class of halogenated aromatic hydrocarbon compounds including polychlorinated dibenzodioxins and dibenzofurans. There are a total of 210 possible congeners, whose physical and chemical properties vary according to the degree and position of the chlorine substitution. These congeners with chlorine substitution in the 2,3,7, and 8 positions, are thought to be responsible for the severe toxicity associated with dioxins. Thus, a few specific congeners have been identified to be analyzed as opposed to the 210 congeners. These required congeners are listed in Special Condition S8 of the permit.

For reporting, total 2,3,7,8-TCDD toxicity equivalents are required to be determined using the 1998 World Health Organization Toxicity Equivalency Factors. The calculated total 2,3,7,8-TCDD toxicity equivalents may not exceed the effluent limit of 0.6 ppq. The minimum quantitation level for each specific congener is listed in the appendix, Attachment 3. If the measured effluent concentration for an individual congener is below its minimum quantitation level, "0" is to be applied for that congener in determining its toxicity equivalent in terms of 2,3,7,8-TCDD.

Storm water collected from both the treated and untreated wood storage areas will receive treatment to ensure compliance is achieved prior to discharge to the infiltration gallery. Sampling location will be after treatment and the monitoring frequency requirements are once every two (2) months.

#### GROUND WATER

The Department has promulgated ground water quality standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department are required to be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

Due to the fact that the facility is currently engaged in a RCRA remediation through an Administrative Order with EPA, Region X, and that the facility is conducting groundwater monitoring requirement in this permit. The Department is requiring all surface stormwater runoff to be collected and treated to meet the proposed effluent limits in this permit prior to infiltration. Past contamination in soil and ground water on-site are being addressed through EPA's RCRA Program.

#### MONITORING AND REPORTING

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to characterize the stormwater in this permit.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into accounts the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Sampling location and frequency requirements for both the treated and untreated wood storage area are those as listed above.

#### LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

#### REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 273-220-210).

#### OTHER PERMIT CONDITIONS

## BEST MANAGEMENT PRACTICES

A best management practices plan is required to ensure proper management practices become an integral part of daily operations in order to prevent accidental or unpermitted releases to the waters of the state.

## STORMWATER POLLUTION PREVENTION PLAN

Storm water discharges directly to ground from the Baxter Arlington site. A stormwater pollution prevention plan (which can be incorporated into the BMP plan) is required in the permit to reduce, eliminate and prevent the pollution of storm water, and to eliminate violations of ground water and sediment standards.

#### SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that has the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

#### SOLID WASTE PLAN

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the solid waste plan designed to prevent solid waste from causing pollution of the waters of the state. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

#### WELL CONSTRUCTION DETAILS

All new wells must be constructed in accordance with Chapter 173-160 WAC, Parts 1 and 3. Figure 7 in Chapter 173-160 WAC illustrates the well construction.

#### TREATMENT SYSTEM OPERATING PLAN

The treatment system will be operated according to procedures and criteria described in an approved operating plan. This plan will be submitted to the Department for review. The plan will, at a minimum:

- A. Define the baseline operating conditions and describe the operating parameters and procedures to be used under these conditions.
- B. Describe the operating parameters and procedures needed to maintain permit compliance during foreseeable unusual operating conditions.
- C. Describe any regularly scheduled maintenance or repair activities at the permitted facilities which would affect the volume or character of the wastes discharged; develop a list including quantities and chemical compositions of any maintenance-related substances (such as cleaners, degreasers, solvents, etc.) that will be used.

The plan may also include an evaluation of influent, intermediate, and final effluent testing results of the treatment system. The purpose of the evaluation would be to identify indicator parameters and monitoring points that would provide for effective compliance monitoring with reduced testing frequencies. If included in the plan, this evaluation should also include a proposed schedule for compliance and operations monitoring.

## **GENERAL CONDITIONS**

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual state waste discharge permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending, or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G12 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G13 requires the payment of permit fees. Condition G14 describes the penalties for violating permit conditions.

#### PERMIT ISSUANCE PROCEDURES

## PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards for ground water based on new information obtained from sources such as inspections, effluent monitoring, and outfall studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

## RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit authorizes stormwater associated with industrial activity to be discharged onto the land surface, and includes the requirement that all conditions set forth in the permit must be complied with. The Department proposes that this proposed permit be issued for a period of five (5) years.

#### REFERENCES FOR TEXT AND APPENDICES

#### J. H. Baxter

- December 31, 2003. <u>Application for a Wastewater Discharge Permit for Discharge of</u> Industrial Wastewater to Ground Permit
- 1997-2004. Miscellaneous Report and Data Submittals.

## Environmental Protection Agency (EPA)

- 1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.
- 1991. <u>Technical Support Document for Water Quality-based Toxics Control</u>. EPA/505/2-90-001.
- 1988. <u>Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling</u>. USEPA Office of Water, Washington, D.C.
- 1985. <u>Water Quality Assessment: A Screening Procedure for Toxic and Conventional</u> Pollutants in Surface and Ground Water. EPA/600/6-85/002a.
- 1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.
- 1989. 40 CFR 429, Subpart A for Wood Preserving Boulton Subcategory.

## Washington Administrative Codes

- 2001. Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC
- 1990. <u>Water Quality Standards for Ground Water Quality Standards.</u> Publication Number 96-02.
- 1992. Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-20 WAC.
- 1984. <u>Underground Injection Control Program, Chapter 173-218 WAC.</u>

## Washington State Department of Ecology

October 2004. Permit Writer's Manual. Publication Number 92-109

#### APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on January 23 and 30, 2004, in the *Everett Herald* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on November 4, 2004, in the *Everett Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to:

Water Quality Permit Coordinator Washington State Department of Ecology Northwest Regional Office 3190-160<sup>th</sup> Avenue SE Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-216-090).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7201, or by writing to the address listed above.

This permit and fact sheet were written by Jeanne Tran, P.E.

## APPENDIX B—GLOSSARY

- **AKART**—An acronym for "all known, available, and reasonable methods of treatment."
- **Best Management Practices (BMPs)**—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.
- **Bypass**—The intentional diversion of waste streams from any portion of a treatment facility.
- **Compliance Inspection Without Sampling**—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.
- Compliance Inspection With Sampling—A site visit to accomplish the purpose of a Compliance Inspection Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.
- Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).
- **Engineering Report**—A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.
- **Grab Sample**—A single sample or measurement taken at a specific time or over as short a period of time as is feasible.
- **Industrial Wastewater**—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities.
- **Minimum Quantitation Level** ( )—The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

- **Responsible Corporate Officer**—A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).
- **Total Suspended Solids** (**TSS**)—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.
- **State Waters**—Lakes, rivers, ponds, streams, inland waters, ground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.
- **Stormwater**—That portion of precipitation that does not immediately evaporate.
- Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

## APPENDIX C—SITE MAPS

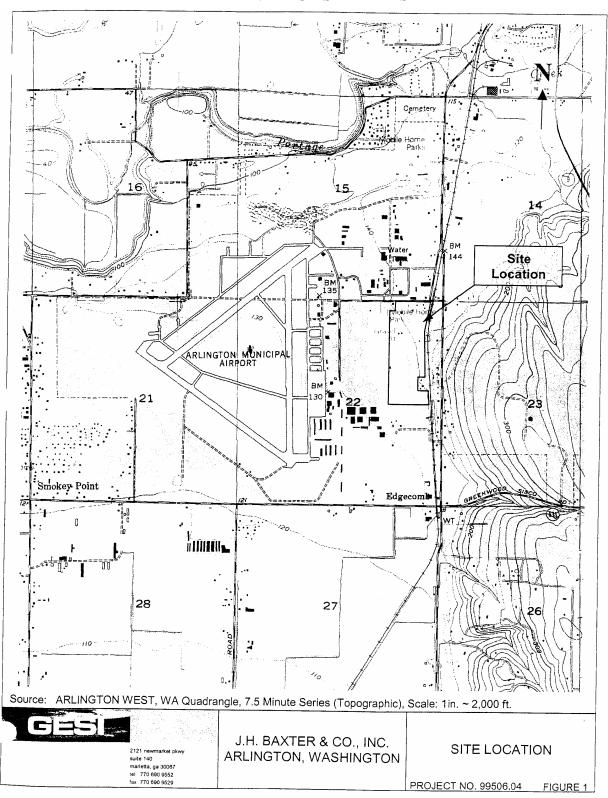


Figure 1.

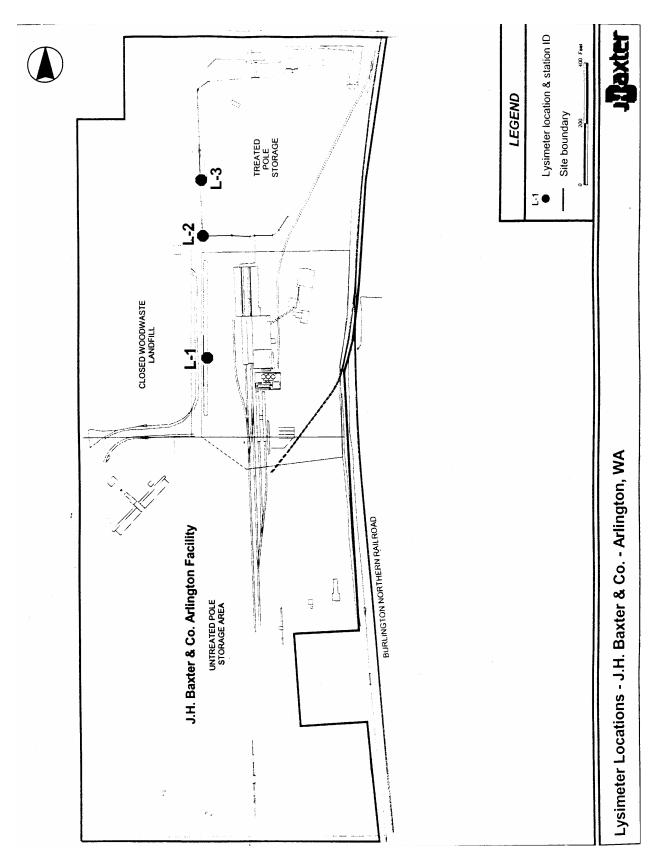


Figure 2.

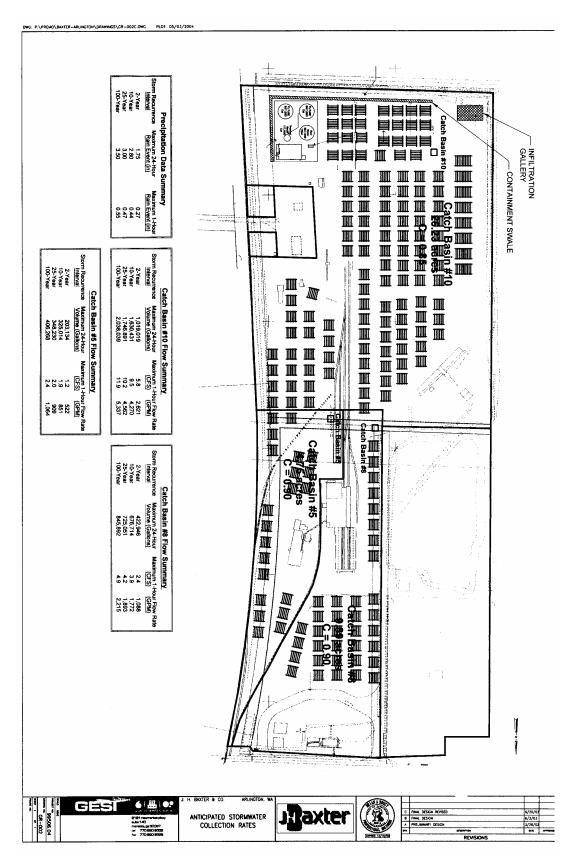


Figure 3.

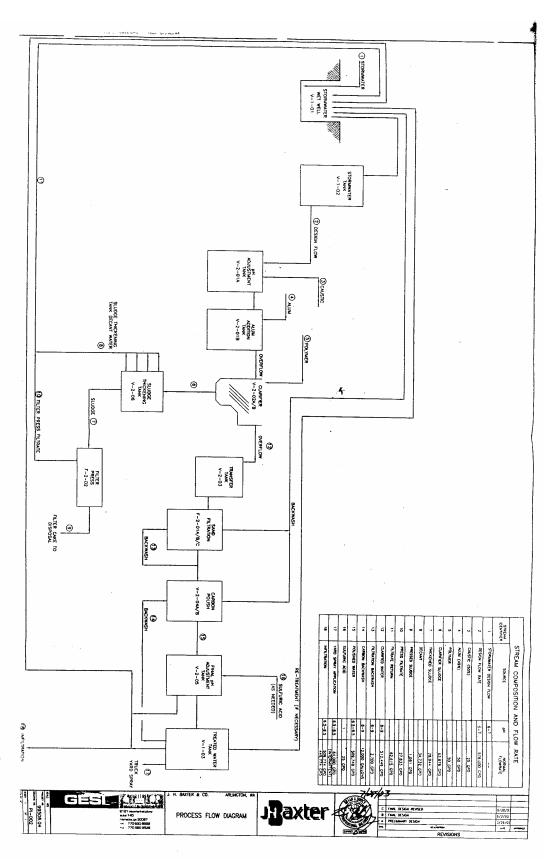


Figure 4.

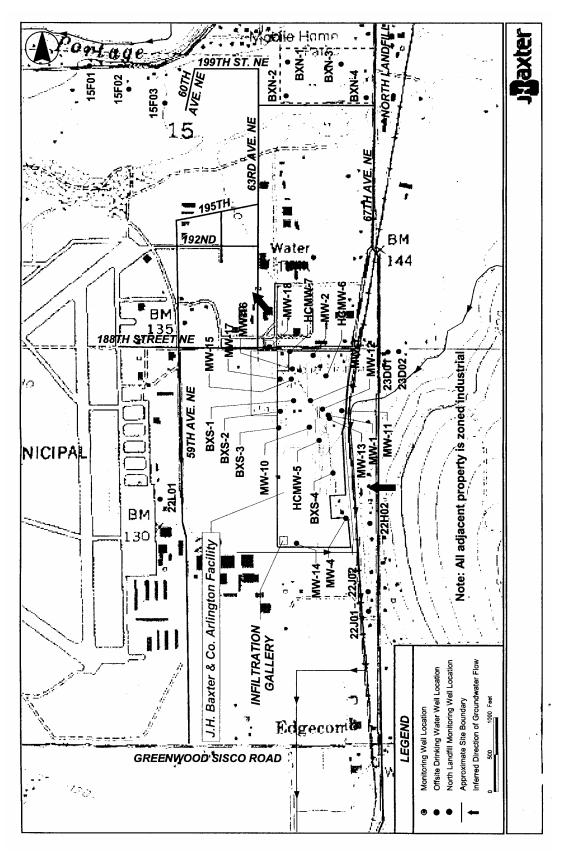


Figure 5.

## APPENDIX D—RESPONSE TO COMMENTS



# STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

June 16, 2004

Mr. James C. Hanken Law Offices of J.C. Hanken 999 Third Avenue, STE 3210 Seattle, WA 98104

Dear Mr. Hanken:

Re: Response to Your Comments on the Draft Permit and Fact Sheet,

Permit No. ST-7425,

J. H. Baxter & Company, Inc. facility, Arlington, Washington

Thank you for your comment letter dated June 11, 2004, which was received by the Department on June 15, 2004, submitted on behalf of J. H. Baxter, Arlington, for the above-referenced permit and fact sheet. A thorough review has been made of your comments, and we offer the following responses. The following responses are outlined in the same format as presented in your letter.

#### Draft Permit and Fact Sheet for Entity Review

Please note that the draft permit and fact sheet was mailed to Ms. RueAnn Thomas, J. H. Baxter at the San Mateo, California address indicated on the application (page1), on May 26, 2004, via certified mail. Our permit coordinator oversees the administrative process for all permits. The draft permit and fact sheet are often mailed out to the Permittee/applicant at the address appearing on the application. When I learned that the draft permit was mailed to J. H. Baxter's headquarters office, I contacted Ms. RueAnn Thomas immediately, and sent an electronic copy of the draft permit and fact sheet to Ms. Thomas. J. H. Baxter was given a period of over two weeks to review factual information presented in the draft permit and fact sheet.

After reviewing your comments, the Department has decided to extend the deadline of the entity review period to June 23, 2004 as requested before proceeding with public notice of the draft permit.

The statement "The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified during this review have been corrected before going to public notice" is part of the boiler plate language in the fact sheet. As mentioned above, you will have until June 23, 2004 to provide comments that pertain to errors and omissions in the proposed draft permit and fact sheet.

Re: J. H. Baxter's draft permit James C. Hanken Page 2

The Department is aware of the fact that a final permit will not be ready for issuance to J. H. Baxter by June 30, 2004, and has prepared a letter informing the facility that the existing permit will serve as a temporary permit until the renewed permit can be issued to the facility. The Department usually sends out this letter two weeks before the expiration date.

## Comments on Draft permit and fact sheet

Permit description is incorrect and inconsistent in regards to Stormwater discharge:

Please supply specific details on the inconsistencies which you are referring to.

• Final compliance date of October 16, 2004 proposed in the draft permit:

Please note that the construction completion deadline set in the existing permit (S6) is August 31, 2003. This date was extended to October 30, 2004, as verified through a telephone conversation between Mr. Norm Kennel (Premier Environmental Services) and I on April 29, 2004 at 10:58 am.

The proposed draft permit contains an interim compliance schedule with interim effluent limits in Special Condition S1 of the permit. The intent of this interim compliance period is for the facility to complete the system construction by October 30, 2004, and be in operation by November 15, 2004. Should the facility require more time to start up the system, the applicant needs to request an extension with a description of the reasons for the request. The intent of this interim compliance period was not mentioned in the fact sheet, and the Department proposes to add the explanation in the interim effluent limitations section on page 11.

• Total PAH effluent limit of 0.01 µg/L based on ground water standards:

The Department agrees with your comments. However, PAH is a pollutant of concern for wood treating industries, and the state has promulgated a ground water standard for that pollutant. Thus, the Department has an obligation to require the Permittee to treat their wastewater to meet the ground water standards. Due to the Department's oversight, PAH was not considered in the pilot study and the design of the system. The Department proposes to remove the PAH limit but to require monitoring-only of the pollutant at this time. After one year of monitoring, the Department will evaluate the PAH data. If data show compliance with the effluent limit of  $0.01~\mu g/L$ , the Department will modify the permit to include this limit. If data show non-compliance with the limit, the facility will be required to submit a proposed plan of modification of the existing treatment system. A reasonable compliance schedule will be proposed to accommodate the modification phrase.

Re: J. H. Baxter's draft permit James C. Hanken Page 3

As mentioned above, your request of an extension is granted until June 23, 2004, and you have until that time to submit comments pertaining to the draft permit and fact sheet. We would be happy to meet in person with you to discuss these issues. I will be contacting you to set up this meeting. Should any questions arise before the meeting date, please contact me by e-mail at <a href="mailto:jtra461@ecy.wa.gov">jtra461@ecy.wa.gov</a> or telephone at (425) 649-7078.

Sincerely,

Jeanne Tran, P. E.

Water Quality Program

Cc: Georgia Baxter, J. H. Baxter & Co., Inc.

RueAnn Thomas, J. H. Baxter & Co., Inc.

Norm Kennel, Premier Environmental Services, Inc.

Jan Palumbo, EPA Region 10 Bill Blake, City of Arlington

Ron Lavigne, AAG-Ecology



#### STATE OF WASHINGTON

## DEPARTMENT OF ECOLOGY

Northwest Regional Office \* 3190 160th Avenue SE \* Bellevue, Washington 98008-5452 \* (425) 649-7000

October 25, 2004

Ms. RueAnn Thomas J. H. Baxter & Company 85 N. Baxter Road P. O. Box 10797 Eugene, OR 97402

Re: Response to Comments on the Draft Permit No. ST-7425

J. H. Baxter & Co. Facility, Arlington, Washington

Thank you for your comments submitted on June 22, 2004, and July 20, 2004 for the above-referenced draft permit. A thorough review has been made of your comments and the discussion we had on June 29, 2004, and the Department offers the following responses. The following responses are outlined in the same format as presented in your letters.

#### Response to Comments letter dated June 22, 2004

Baxter's comment (page 1): The Department's June 18, 2004 letter indicated that J. H. Baxter (Baxter) would receive a temporary permit effective March 1, 2004 if the Department fails to issue the re-newed permit by the expiration date.

<u>Department's response</u>: Baxter's temporary permit is effective as of March 1, 2004 until the re-newed permit is issued to Baxter.

<u>Baxter's comment (page 2, first bullet)</u>: The specific details of inconsistencies in regard to the stormwater description on the cover page of the permit and fact sheet are provided in the following sections of this document.

Department's response: Corrections will be made to ensure consistency.

<u>Baxter's comment (page 2)</u>: Baxter believes the proposed final compliance date should include the start-up period as discussed in the following General Issues 2.

<u>Department's response</u>: The start-up period was included in the proposed final compliance date, for a period of 15 days. If Baxter requires more time for start up, the Department will grant the additional time as long as it is reasonable.

Baxter's comment (page 3): Regarding the PAH limit of 0.01  $\mu$ g/L based on groundwater standards, Baxter proposes that the Department and Baxter develop a technology-based PAH limit following a mutually agreed upon monitoring program. As discussed in the previous section, Baxter cannot agree to comply with an unachievable PAH effluent limit.

Department's comment: As indicated in the Department's response to you dated June 16, 2004, the Department will require Baxter to meet the groundwater standard for PAH at the point of discharge. According to the Department's Chemists, EPA Test Method 8270 GC/MS SIM can achieve a method detection limit (MDL), and a practicable quantitation limit (PQL) below the standard. These levels have been achieved by our chemists. Baxter needs to seek a laboratory which has the capability to run the above test method, and achieve a MDL and PQL that are lower than the PAH standard, if possible. The Department urges Baxter to take this action as soon as possible. If there is no laboratory within a reasonable distance that can perform the above test method, the Department will consider setting a limit at the MDL value and accessing compliance with the limit at the QL value using the approved analytical test method for PAH. If this were to occur, Baxter would be required to submit the laboratory's proposed test operating procedure for PAH, to the Department for review and approval. Hopefully, this can be done before the issuance of the final permit. In addition, the Department proposes no limit to be set at this time for PAH, but monitoring will be required for a period of two years. If data show compliance with the effluent limit of 0.01  $\mu$ g/L or the MDL for PAH, the Department will modify the permit to include this limit. If data show non-compliance with the limit (either based on groundwater standard, or MDL value), Baxter will be required to modify the existing treatment system to include treatment for PAH. The compliance period will be determined based on the nature of Baxter's proposed treatment system modification, but will not exceed a period of 3 years. During this interim period, a technology-based limit will be developed using the last two years of monitoring data for PAH. In any event, since the pilot study conducted by Baxter in 2002 indicated that the system is capable of achieving the groundwater standard for dioxin (0.6 ppq), the Department believes that there is a substantial potential that the treatment system will be able to treat the stormwater to meet the PAH limit as well.

## General Issues Regarding the draft permit and fact sheet

 Baxter's comment (page 1 of 32): The permit description is incorrect and inconsistent throughout both documents.

Department's response: As you requested, the term "stormwater discharge onto land surface via bioswale" used in the permit and fact sheet will be replaced with "stormwater discharge to infiltration gallery following treatment".

- 2. Baxter's comment (page 1 of 32): Request the final compliance date be changed from October 16, 2004 to December 1, 2004.
  - Department's response: The final compliance date proposed in the draft permit (page 7, 8, and 9) was November 16, 2004. Your request of an additional two weeks for start up of the treatment system is granted. The final compliance date will be changed to December 1, 2004.
- Baxter's comment (page 2 of 32): Request for a compliance period of 5 years to meet the PAH groundwater standard.
  - Department's response: Please see the Department's response on the previous page.
- 3a. Baxter's comment (page 2 of 32): The PQL for each individual PAH compound is greater than the criterion. The MDL should not be used for enforcement purposes.
  - Department's response: Please see the Department's response on page 2 above.
- 3b. Baxter's comment (page 2 of 32): The criterion for total PAH is overly conservative. Baxter strongly urges the Department to reconsider imposition of a numerical standard at this time, and consider a technology-based limitation, or a 5-year compliance schedule to tune and modify the stormwater treatment system.
  - Department's response: Please see the Department's response on page 2 above.
- Baxter's comment (3 of 32): Baxter suggests that it is unrealistic and unfair to require achievement of this discharge limit at this point in time, especially since system construction is underway.
  - Department's response: Please see the Department's response on page 2 above.
- 5a. Baxter's comment (4 of 32): It is Baxter's opinion that monitoring of any site wells under SWDP is no longer appropriate. It is unclear why the Department is requiring the monitoring wells beyond the point of compliance for discharge of treated water.
  - Department's response: After much consideration regarding the fact that clean up issues is being addressed by EPA-RCRA Unit, the Department has decided not to require Baxter to conduct groundwater monitoring. However, the Department will hold Baxter to meet the following conditions: 1) The treated storm water will be required to meet the permit limits prior to discharge to the infiltration gallery; 2) Untreated storm water will be required to be stored in impermeable

containers/tanks or **lined** containment swale; 3) Baxter will be required to take immediate actions to prevent ponding on-site, to the greatest extent possible. The Department proposes to incorporate these requirements in the permit and to remove all ground water monitoring from the permit.

5b. Baxter's comment (page 4 of 32): Baxter is conducting a facility-wide groundwater assessment program under the direction of EPA, and groundwater monitoring of the closed wood waste landfill under the direction of Snohomish County Health District. Data from the Site Investigation indicate that the groundwater contamination present beneath the facility is the result of historical operations, and is not related to discharges from the stormwater treatment plant being permitted under the SWDP. Baxter strongly urges that groundwater monitoring should be conducted as required by any Corrective Measures for the facility, which will be defined following completion of the Site Investigation pursuant to the Administrative Order on Consent (AOC) with EPA. It is anticipated that EPA, Ecology, and Baxter will work together to develop an appropriate monitoring plan as part of the Corrective Study. As a courtesy, Baxter will continue to provide Ecology with the results of groundwater monitoring activities generated during the Site Investigation.

Department's response: See the Department's response for 5a on the previous page.

Sc. Baxter's comment (page 5 of 32): Monitoring groundwater quality from wells within, cross-gradient, and down-gradient of the facility is not an effective way to measure the effectiveness of the treatment system. Groundwater monitoring data can effectively evaluate the presence or absence of dissolved-phase COPCs resulting from historic releases. However, these data cannot be used to distinguish between a dissolved phase plume resulting from historical releases, and new discharges from the stormwater treatment system. Therefore, the monitoring of groundwater conditions beyond the point of compliance is an unnecessary and unwarranted burden. Nor is the proposed monitoring justified under WAC 173-216-110(1) (g) which states that the monitoring needs to be "appropriate". Moreover, the groundwater contamination from Historical Practices is being addressed by the EPA under the AOC.

Department's response: See the Department's response for 5a.

5d. Baxter's comment (page 4 of 32): The proposed addition of new wells and additional analyses proposed in the draft permit would substantially increase Baxter's compliance costs.

Department's response: The Department has an obligation to require all discharges to meet the state water quality standards to ensure waters of the state are protected for beneficial uses. Please see the Department's response for 5a.

 Baxter's comment (page 5 of 32): The Model Wood Preserving Fact Sheet was not attached for review.

Department's response: A copy of the Model Wood Preserving Fact Sheet will be mailed to Baxter. Please note that this model fact sheet is the same model fact sheet that accompanies the final permit and individual fact sheet when they are issued to Baxter every 5 years.

## Specific Comments on Draft State Waste Discharge Permit Language

Baxter's comment 1, page 1 of the permit: Baxter requests the phrase "stormwater discharges onto land surface via bioswale" be changed to "stormwater discharge to infiltration gallery following treatment."

Department's response: The language will be changed as requested.

Baxter's comment 2, page 4 (summary of permit report): The submittal dates for the Discharge Monitoring Reports (DMRs) listed on this table are inconsistent with the text in S3.A of the permit, where it states that the reports are to be received no later than the 5<sup>th</sup> day of the month following the completed monitoring period.

Department's response: There is an error on the submittal date listed in S3.A, it should read "15<sup>th</sup> day of the month following the completed monitoring period". Generally, the Department requires DMRs to be received no later than the 15<sup>th</sup> day of the month following the completed monitoring period, unless otherwise specified in the permit. Several years before, Baxter requested the submittal date be changed to read "30<sup>th</sup> day of the month following the completed monitoring period". Therefore, the Department proposes that this submittal date (30<sup>th</sup> day of the month following the completed monitoring period) be remained as previously approved. The submittal date on page 4 and in S3.A of the permit will be corrected to read the same.

Baxter's comment 3, page 5 of the permit: Baxter recommends that the interim effluent limitations time period extend through the system start-up period ending November 30, 2004.

Department's response: Request granted.

Baxter's comment 4, page 5 of the permit: Baxter objects to a new treatment criteria for Total PAHs, especially during the startup period. In addition, Baxter recommends the consistent use of units in this table (i.e., mg/L).

Department's response: See the Department's response on page 2 of this response letter. The use of unit consistency will be applied in this table.

Baxter's comment 5, page 5 of the permit: Baxter recommends the consistent use of footnote language for PAHs.

Department's response: A consistent footnote language for PAH will be applied.

Baxter's comment 6, page 6 of the permit: Baxter requests the compliance date be changed to December 1, 2004, and the treated stormwater be discharged to a constructed subsurface infiltration gallery.

Department's response: Please see the Department's response for 1 and 2. Baxter's comment 7: Page 6 of the permit, regarding PAHs limit, see comment 4 above.

Department's response: Please see the Department's response on page 2 regarding PAHs.

Baxter's comment 8, page 6 of the permit: See comment 3 and 4 above regarding treatment criteria for total PAHs.

Department's response: See the Department's response on page 2 regarding PAHs.

Baxter's comment 9, page 7 of the permit: Baxter requests the compliance date to be changed to December 1, 2004.

Department's response: Please see the Department's response to General Issues 2 above.

Baxter's comment 10, page 7 of the permit: The PAH limit is not feasible at this time.

Department's response: See the Department's response on page 2 regarding PAHs.

Baxter's comment 11, page 7 of the permit: The footnote language for dioxin is not consistent on page 9 and 10.

Department's response: Correction will be made to ensure consistency is applied in these footnotes for dioxin.

Baxter's comment 12, page 7 of the permit: Same comments as comment 5 and 8.

Department's response: See response for comments 5 and 8.

Baxter's comment 13, page 8 of the permit: Comment is the same as comment 3 above, Baxter requests the compliance date be changed to December 1, 2004.

Department's response: Please see the Department's response for comment 3.

Baxter's comment 14, page 8 of the permit: Baxter requests footnote 1 in S2 be modified by removing the description of the rainfall event for sampling (keeping the first sentence of the first paragraph).

Department's response: The Department agrees with Baxter because stormwater on-site will soon be collected for treatment prior to discharge to the infiltration gallery. The sampling requirement for a specific rain event is no longer appropriate. Therefore, this language will be removed from the permit.

Baxter's comment 15, page 9 of the permit: The footnote for dioxin should reference Attachment 1 instead of Attachment 3.

Department's response: Correction will be made on this.

Baxter's comment 16, page 9 of the permit: Same comment as comment 3, Baxter requests the compliance date be changed to December 1, 2004.

Department's response: Please see the Department's response for comment 3.

Baxter's comment 17, page 10 of the permit: Comment same as those under comment 14.

Department's response: Please see the Department's response for comment 14.

Baxter's comment 18, page 10 of the permit: The footnote for dioxin should reference Attachment 1 instead of Attachment 3.

Department's response: Correction will be made on this.

Baxter's comment 19, page 11 of the permit: Comment same as those under General Issues 5a (page 3 of this letter) regarding ground water monitoring.

Department's response: Please see response to General Issues 5a on page 3.

Baxter's comment 20, page 14 of the permit: The submittal for the discharge monitoring reports is inconsistent with the dates in the table on page 4 of the permit.

Department's response: The language under reporting in S3.A will be corrected to read that DMRs shall be received no later than the 30<sup>th</sup> of the month following the completed monitoring period.

Baxter's comment 21, Attachment 2: The text at bottom of the table should read "total 2,3,7,8-TCDD toxicity (1998 WHO) equivalents: 4085.87 ppq".

Department's response: Your comment will be incorporated into the fact sheet.

## Specific Comments on Draft Fact Sheet, Permit No. ST-7425

Baxter's comment 1: Page 1, Baxter suggests the last sentence of the first paragraph to read as follows: "The Department is issuing this permit which will allow discharge of treated stormwater through a subsurface infiltration gallery."

Department's response: Your comment will be incorporated into the fact sheet. Baxter's comment 2, page 1: The contact name should be "RueAnn Thomas, Environmental Projects Director."

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 3, page 1: The description for receiving water should be changed to read as follows: "stormwater discharge to infiltration gallery following treatment."

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 4, page 4: Baxter requests the language in the second and third sentences of the first paragraph be changed to read as follows: "The facility has been in operation since 1971 using pentachlorophenol (PCP as a preservative). Copper naphthenate has been used as a preservative since March 2003. Creosote was used beginning in 1983 and discontinued in 1990."

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 5, page 4: Baxter requested that the language appearing in the second sentence from the bottom of the third paragraph be changed to read as follows: "There are two rail spurs leading into the site that are used for loading finished product and on occasion for process product delivery (i.e. base oil or solution)."

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 6, page 5: Under the Industrial Process section, the referenced Model Wood Preserving Fact Sheet was not attached to the document provided to Baxter for review. Therefore, Baxter cannot verify the accuracy of the Department's comment. This comment is also applicable to further references to the Model Wood Preserving Fact Sheet in both documents.

Department's response: A copy of the Model Wood Preserving Fact Sheet will be mailed to you along with this response letter.

Baxter's comment 7, page 5: Under the Stormwater Discharge to Ground, first paragraph, same comment as above.

Department's response: A copy of the Model Wood Preserving Fact Sheet will be mailed to you along with this response letter.

Baxter's comment 8, page 6: Second paragraph, construction of the containment swale and the infiltration gallery are underway and not completed yet. The treatment system construction is anticipated to be completed by the end of October and to be in operation in December 2004.

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 9, page 6: Under Ground Water, the second sentence is incorrect. There was no mobile home residence on the property acquired by J. H. Baxter on January 7, 2002. Additionally, Baxter believes that the correct Figure citation is Figure 5.

Department's response: Correction will be made in the fact sheet.

Baxter's comment 10, page 7: The information provided in this section is incomplete regarding drinking water wells. The water wells identified within the beneficial use survey area or in the Drinking Water Sampling and Alternate Water Supply Work Plan were sampled biannually during four sampling events in June 2001, January 2002, July 2002, and January 2003. The sample results indicated no pentachlorophenol and tetrachlorophenols were detected. Thus, EPA has determined that the drinking water sampling program is complete and no additional sampling is required.

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 11, page 7: The inclusion of ground water monitoring requirements will not provide useful information regarding the stormwater treatment system and the groundwater contamination is being addressed by EPA. See General Issues 5.

Department's response: Please see the Department's response for General Issues 5a, on page 3 of this response letter.

Baxter's comment 12, page 9: Baxter requests that the language pertaining to the fact that no monitoring was reported for monitoring well BXS3, be removed from the fact sheet because Baxter resubmitted the report in April 2004.

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 13, page 9: Baxter does not agree with including groundwater data from monitoring wells in the section entitled Stormwater Characterization.

Department's response: A separate section will be created for the groundwater data.

Baxter's comment 14, page 10: Comment refers to comments made on the PAHs limit in the General Issues section, on page 2 of this response letter.

Department's response: See the Department's response regarding PAHs, on page 2 of this response letter.

Baxter's comment 15, page 11: Under the Proposed Permit Limitations and Conditions, the interim period needs to extend through November 30, 2004 to allow for completion of construction and start up.

Department's response: Your comment will be incorporated into the fact sheet.

Baxter's comment 16, page 11 & 12: The discussion pertaining to the imposition of PAH limit under the Proposed Permit Limitations and Conditions, see General Issues section for comment.

Department's response: Please see the Department's response regarding PAHs in the General Issues section.

Baxter's comment 17, page 13: Under the Final Effluent Limitations, see General Issues section regarding the problems with imposing PAH parameters.

Department's response: Please see the Department's response regarding PAHs in the General Issues section.

Baxter's comment 18, page 14: Monitoring and Reporting, see General Issues section and previous comments regarding inconsistencies in the reporting schedule and a proposed modified schedule as well as the inability of the groundwater monitoring to provide information on the performance of the stormwater treatment system.

Department's response: Please see the Department's responses for these comments in the General Issues section.

You also submitted a copy of Appendix C, Declaration of Construction of Water Pollution Control Facilities. However, Appendix C did not include a Professional Engineer's (PE) stamp. Please resubmit Appendix C with a PE stamp, signature and date.

## Response to Comments letter dated July 20, 2004

Your comments presented in this letter regarding groundwater monitoring have been addressed in 5a, on page 3 of this letter.

## Additional Changes in the Fact Sheet

During the process of reviewing the draft permit and fact sheet, the Department found some languages that need correction. Page 6 in the fact sheet, last sentence of the third paragraph reads as follow: "The containment swale would be used as emergency storage for storm water only, when the treatment system encounters a problem which requires to be shut down." The Department proposes the sentence be corrected to read as follows: "Untreated storm water will be required to be stored in impermeable containers/tanks or lined containment swale. To line the containment swale, the facility may install double synthetic membrane liners or a composite liner. Composite liner consists of an upper and lower component. The upper component consists of minimum 30-mil flexible membrane liner (FML), and the lower component of at least of two-foot layer of compacted soil with a hydraulic conductivity of no more than 1 x 10<sup>-7</sup> cm/sec. The FML component must be installed in direct and uniform contact with the compacted soil component."

The Department believes that all of your comments presented in both letters above have been addressed. If you have additional questions pertaining to the permit and fact sheet, please contact me again. I can be reached at (425) 649-7078. The draft permit and fact sheet will be modified as indicated in this letter, before they will be published for public notice.

Sincerely,

eanne Tran, P.E.

Mater Quality Program

Attachment: Fact Sheet for the Model Wood Preserving NPDES Permit

Cc: Norm Kennel, Premier

Georgia Baxter, J. H. Baxter & Co. Mary Larson, J. H. Baxter & Co.



# STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 18, 2005

Ms. RueAnn Thomas Environmental Programs Director 85 N Baxter Road P. O. Box 10797 Eugene, OR 97440-2797

Dear Ms. Thomas:

Re: Response to Your Comments on the Draft Permit No. ST-7425

J. H. Baxter & Co., Arlington, Washington

Thank you for your comments submitted on December 3, 2004 for the above-referenced draft permit. A thorough review has been made of your comments and the Department offers the following responses. The following responses are outlined in the same format as presented in your letter.

#### REPONSES TO COMMENTS ON THE DRAFT PERMIT

## Response to Comment 1: Page 4. Summary of Report Submittals

You requested that the submittal date for the Treatment System Operating Plan be changed to December 30, 2004. Since the permit will be issued in January 2005, the above submittal date requirement will be changed to February 1, 2005.

Response to Comment 2: Page 5. Interim Effluent Limits, Treated Product Storage Area Stormwater.

You requested the end date for the interim period be changed to December 31, 2004. Since the permit will be issued in January 2005, the interim period end date will be changed to January 31, 2005.

## Response to Comment 3: Page 6. Interim Effluent Limits, Untreated Wood Storage Area Stormwater

You requested the end date for the interim period be changed to December 31, 2004. Since the permit will be issued in January 2005, the interim period end date will be changed to January 31, 2005.

# Response to Comment 4: Page 6. Final Effluent Limitations, Stormwater from both Treated and Untreated Wood Storage Areas

You requested the effective date be changed to January 1, 2005. Since the permit will be issued in January 2005, the effective date will be changed to February 1, 2005.

## Response to Comment 5: Page 7. Final Effluent Limitations, Untreated Stormwater

You requested the effective date be changed to read January 1, 2005, and the language pertaining to the containment swale (bioswale) be removed. This is because the facility has elected to remove the bioswale and backfill with clean soil, and all stormwater will be contained in the impermeable tanks. Since the permit will be issued in January 2005, the effective date will be changed to February 1, 2005. The bioswale language in this section will be removed.

## Response to Comment 6: Page 7. Monitoring Requirement, Section A

You requested the end date for the interim monitoring compliance period be changed to January 1, 2005. Since the permit will be issued in January 2005, the end date will be changed to January 31, 2005.

## Response to Comment 7: Page 9. Monitoring Requirement, Section B

You requested that the effective date for monitoring the monitoring requirement be changed to January 1, 2005. Since the permit will be issued in January 2005, the effective date will be changed to February 1, 2005.

## Response to Comment 8: Page 11. Reporting and Recordkeeping Requirements, Section A

You requested the first monitoring period to begin on January 1, 2005. Since the permit will be issued in January 2005, the monitoring beginning date will be changed to the effective date, which is also the issuance date of this permit.

You also requested the monitoring reports be due on April 30, July 30, October 30 and January 30 each year. Please note that this permit is a stormwater permit, and the storm season is generally between September and May. Discharge in the summer time is not expected because of low rainfall events and the fact that there is adequate storage capacity at the site. This makes three quarterly monitoring periods: September through November, December through February, and March through May. Since the report is required to be submitted 30 days following the completed monitoring period, this makes the reports due dates as follows: December 30<sup>th</sup>, March 30<sup>th</sup>, and June 30<sup>th</sup>. Therefore, these due dates as proposed in the permit will remain unchanged. The first report is due March 30<sup>th</sup>. This covers any monitoring that may be conducted in January and required to be conducted in February 2005.

## Response to Comment 9: Page 15. Treatment Systems Operating Plan.

You requested the submittal date for the Treatment System Operating Plan be changed to December 30, 2004. Since the permit will be issued in January 2005, the effective date will be changed to February 1, 2005.

## Response to Comment 10: Page 15. Compliance Schedule

Your comment is noted in regard to the ground water limit of 0.01  $\mu$ g/L for PAH being overly conservative. However, due to the fact that this limit is a ground water standards - based limit, the Department is obligated to require the Permittee to meet it.

You requested that the last sentence of paragraph A under the Compliance Schedule section be changed to read "If data show noncompliance with the limit, Baxter and the Department will evaluate technology-based PAH effluent limitations, and if necessary, modify the permit or treatment system." As indicated in the latter part of the paragraph B of this section, an interim technology-based limit for PAH will be developed by the Department if Baxter requires time to modify their treatment system to treat PAHs. Therefore, the Department proposes no changes in paragraph A as previously proposed.

## COMMENTS ON THE DRAFT FACT SHEET

## Comment 11: Page 1. Contact Name.

The contact name will be corrected to read "Ms. RueAnn Thomas."

## Response to Comment 12: Last Sentence in the Second Paragraph of Page 6. Storm water Discharge to Ground

You requested the treatment system construction completion date be changed to November, and be in operation by January 2005. Since the permit will be issued in January 2005, the construction completion date will be changed to November 2004 as you requested, and the treatment system will be required to be in operation by February 1, 2005.

## Response to Comment 13: Page 6. Storm water Discharge to Ground

You requested the liner specification presented in the third paragraph of page 6 be removed because Baxter has elected to remove the containment swale (bioswale). Baxter proposes to backfill the containment swale with clean soil, rather than to install double synthetic membrane liners or a composite liner for temporary storage of untreated storm water. You indicated that all on-site storage of untreated storm water will be in impermeable tanks. Your request is granted, the liner specification language will be removed in the third paragraph.

## Response to Comment 14: Page 13. Interim Effluent Limitations

See response to comment 10 above.

## Response to Comment 15: Page 10. Storm water Characterization

You requested the groundwater data table be removed. First, please note that the groundwater data is presented under the section entitled Groundwater Monitoring Data and not in the section entitled "Storm water Characterization." Second, since this is a storm water permit which discharges to on-site land, information pertaining to geology and hydrogeology including groundwater data for the site, are necessary to be included in the permit, and disclosed to the public. Whether the ground water contamination is a result of historical practices or current practices, the existing ground water quality of the site needs to be presented in the fact sheet. Thus, the ground water table presented under the Groundwater Monitoring Data on page 10 of the fact sheet will remain unchanged.

## Response to Comment 16: Page 14. Final Effluent Limitations

You requested the term "International Toxicity Equivalency Factors" be changed to "1998 World Health Organization Toxicity Equivalency Factors" in the second paragraph of page 14. Your request will be incorporated in the fact sheet.

## Response to Comment 17: Page 15. Monitoring and Reporting

You requested the Groundwater section on page 15 be removed since there is no groundwater monitoring is required in the permit. This section will be removed as requested.

The draft permit will be finalized and issued to J. H. Baxter & Company by next week. If you have additional questions, please write, e-mail me at <a href="mailto:jtra461@ecy.wa.gov">jtra461@ecy.wa.gov</a> or telephone me at (425) 649-7078.

Sincerely.

Jeanne Tran, P.E.

Water Quality Program

Cc: Norm Kennel, Premier Environmental Services, Inc.

Georgia Baxter, J. H. Baxter & Co.

Mary Larson, J. H. Baxter & Company